UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte KENT L. CHRISTOPHER

Appeal No. 2005-0980
Application No. 09/818,228

ON BRIEF

Before GARRIS, PAK, and WARREN, Administrative Patent Judges.
PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's refusal to allow claims 1 through 4, 6 through 17, 19 through 23, and 26 through 28. Claims 5, 18, 24 and 25, the other remaining claims in the above-identified application, are no longer the subject of this appeal since they are no longer rejected by the examiner. See the Answer, page 2. We have jurisdiction pursuant to 35 U.S.C. § 134.

APPEALED SUBJECT MATTER

According to the appellant (the Brief, page 7):

> Claims 1, 2, 6, 8, 11-15, 20, 23...and 28 stand or fall together....
> Claims 3 and 6...stand or fall together....
> Claims 4 and 17...stand or fall together....
> Claims 7 and 19...stand or fall together....
> Claims 9, 10, 21, 22, 26 and 27...stand or fall together....

Therefore, for purposes of this appeal, we select claims 1, 3, 4, 7 and 9 as representative of the above five groups of the claims on appeal and determine the propriety of the grounds of rejection set forth below based on these claims alone. See 37 CFR § 1.192(c)(7) (2003) and 37 CFR § 41.37(c)(1)(vii)(2004). Claims 1, 3, 4, 7 and 9 are reproduced below:

1. A nasopharyngeal catheter for open delivery of a continuous flow of air/oxygen into a patient's distal nasopharynx or oropharynx to supplement a patient's spontaneous respiration in treatment of respiratory failure, respiratory insufficiency, or sleep apnea syndrome, said nasopharyngeal catheter comprising:

a nasal catheter having a proximal end and a distal end adapted to extend through a patient's nose and into the patient's distal nasopharynx or oropharynx without restricting the patient's spontaneous respiration through the patient's nasopharynx or oropharynx;

a delivery tube adapted to extend below the patient's nostril connected to the proximal end of the nasal catheter; and

a gas source delivering a continuous flow of air/oxygen at a rate of approximately 4 to 40 liters per minute through the delivery tube and nasal catheter into the patient's distal nasopharynx or oropharynx to supplement the patient's respiration.

3. The nasopharyngeal catheter of claim 2 wherein the nasal catheter further comprises a plurality of markings indicating a series of common lengths for the nasal catheter.

4. The nasopharyngeal catheter of claim 1 wherein the nasal catheter further comprises a radio-opaque stripe.

7. The nasopharyngeal catheter of claim 1 wherein the nasal catheter further comprises a hydrophilic coating.

9. The nasopharyngeal catheter of claim 1 further comprising a humidifier controlling the humidity of the gas delivered through the nasal catheter.

PRIOR ART

The prior art references relied upon by the examiner are:

Spofford et al. (Spofford)	5,297,546	Mar. 29, 1994
Daniell et al. (Daniell)	6,050,260	Apr. 18, 2000 (Filed Dec. 1, 1997)
Brain	6,055,984	May 2, 2000 (Filed Nov. 5, 1997)
Bowden et al. (Bowden)	6,374,827 B1	Apr. 23, 2002 (Filed Oct. 5, 1999)
Lethi	6,394,093 B1	May 28, 2002 (Filed May 13, 1999)

REJECTIONS

The appealed claims stand rejected as follows:

1) Claims 1, 2, 6, 8, 11 through 15, 20, 23 and 28 under 35 U.S.C. § 103 as unpatentable over the disclosure of Lethi[1];

2) Claims 3 and 16 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Lethi and Bowden;

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[1] Claim 23 is included in this statement of rejection since it is readily apparent from the examiner's Answer and the appellant's Brief that the rejection of claim 23 is not withdrawn even though it is inadvertently omitted in the statement of rejection set forth in the Answer. See the Answer, page 7 and the Brief, pages 7-8.

3) Claims 4 and 17 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Lethi and Brain;

4) Claims 7 and 19 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Lethi and Spofford; and

5) Claims 9, 10, 21, 22, 26 and 27 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Lethi and Daniell.

OPINION

We have carefully reviewed the claims, specification and applied prior art references, including all of the arguments advanced by both the examiner and the appellant in support of their respective positions. This review has led us to conclude that the examiner's Section 103 rejections are well founded. Accordingly, we will sustain the examiner's Section 103 rejections for the reasons set forth in the Answer and below.

Under 35 U.S.C. § 103, to establish a *prima facie* case of obviousness, there must be some objective teachings or suggestions in the prior art and/or knowledge generally available to a person having ordinary skill in the art that would have led such person to arrive at the claimed subject matter. *See generally in re Oetiker*, 977 F.2d 1443, 1447-48, 245 USPQ2d 1443, 1446-47 (fed. Cir. 1992)(*Nies, J., concurring*); *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). The knowledge generally available to a person having ordinary skill in the art includes the appellant's admission regarding what was known in the art at the time of the invention. *In re Nomiya*, 509 F.2d 566, 570-71, 184

USPQ 607, 611-12 (CCPA 1975)(the admitted prior art in an applicant's specification may be used in determining the patentability of a claimed invention); *in accord In re Davis*, 305 F.2d 501, 503, 134 USPQ 256, 258 (CCPA 1962).

REJECTION BASED ON LETHI

As evidence of obviousness of the subject matter defined by claims 1, 2, 6, 8, 11 through 15, 20, 23 and 28 under Section 103, the examiner relies on the disclosure of Lethi. See the Answer, pages 4-8. The examiner finds (Answer, page 4), and the appellant does not dispute (Brief, pages 8-10), that Lethi teaches

> a nasopharyngeal catheter for open delivery of a continuous air/oxygen into a patient's distal nasopharynx or oropharynx to supplement a patient's spontaneous respiration... comprising a nasal catheter 1 having a proximal end and a distal end adapted to extend through a patient's nose and into the patient's distal nasopharynx or oropharynx...; a delivery tube 9 adapted to extend below the patient's nostril connected to the proximal end of the nasal catheter; and a gas source.

The examiner finds (Answer, page 12), and the appellant does not dispute (Brief, pages 8-10), that

> Lethi teaches one source of gas to be a hospital room oxygen supply system (See Col. 4, lines 53-59 of Lethi). A hospital room oxygen supply system is inherently capable of delivering oxygen with a flow rate of 4-40 L/min.

The appellant argues that the nasal catheter described in Lethi cannot be used "without restricting the patient's spontaneous respiration through the patient's nasopharynx or oropharynx" as required by claim 1 on appeal. See the Brief, pages 8-9. In support of this argument, the appellant refers to an inflatable cuff 3 of Lethi's nasal catheter, which is

said to create "an air-tight obstruction[2] between the nasopharynx and the rest of the patient's breathing passage." See, e.g., the Brief, page 8. Implicit in the appellant's argument is that the claimed functional limitation relating to restricting a patient's spontaneous respiration precludes a nasal catheter having an inflatable cuff, such as the one described in Lethi. We do not agree.

We initially note that the functional language in question limits the claimed nasal catheter to the one that cannot restrict the patient's spontaneous respiration through the patient's nasopharynx or the patient's oropharynx as urged by the examiner. Thus, we concur with the examiner's determination at page 12 of the Answer that the functional language does not preclude Lethi's nasal catheter which does not restrict the patient's spontaneous respiration through the patient's oropharynx. As pointed out by the appellant (Brief, page 8), the inflatable cuff portion of Lethi's nasal catheter is located only at the nasopharynx.

Even were we to determine that the above functional language somehow precludes a nasal catheter obstructing the nasopharynx, such as the one taught by Lethi, our conclusion would not be altered. As pointed out by the examiner (Answer, page 12), Lethi's nasal catheter has a cuff which can be deflated (not blocking the nasopharynx) or inflated (blocking the nasopharynx). In other words, Lathi's nasal catheter is capable of

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[2] The appellant's argument appears to indicate that the claim language "restricting" is defined as "an air-tight obstruction".

being used "without restricting the patient's spontaneous respiration through the nasopharynx".[3] Thus, we concur with the examiner that the claimed functional limitation relating to restricting a patient's spontaneous respiration does not preclude Lathi's nasal catheter. The appellant simply has not demonstrated that the claimed functional language would have rendered the claimed nasal catheter structurally different from Lathi's nasal catheter. *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997)(There is nothing inherently wrong with defining a mechanical or product component by what it does rather than what it is in drafting patent claims. However, choosing to define it by what it does (functionally) has some risk. The burden is placed on the applicant to prove with objective evidence that the prior art product or apparatus does not necessarily possess the claimed function if claimed and prior art products or apparatuses reasonably appear to be the same or substantially the same.); *In re Casey*, 370 F.2d 576, 580, 152 USPQ 235, 238 (CCPA 1967)(A manner in which a claimed apparatus is intended to be used does not differentiate the claimed apparatus from a prior art apparatus having the claimed structures); *Ex parte Masham*, 2 USPQ2d 1647, 1648 (Bd. Pat. App. & Int. 1987).

The appellant argues that Lethi does not teach or suggest a gas source having the function recited in claim 1, i.e., "delivering a continuous flow of air/oxygen at a rate of

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[3] Claim 1 on appeal is directed to a nasopharyngeal catheter, not a method of operating or using a nasopharyngeal catheter. Thus, it is nor important how the prior art nasopharyngeal catheter is employed. What is important is whether the prior art nasopharyngeal has a structure capable of being operated in the claimed manner.

approximately 4 to 40 liters per minute". See the Brief, page 9, together with claim 1. However, as indicated *supra*, the appellant has not disputed the examiner's finding that the hospital room oxygen supply in Lathi "is inherently capable of delivering oxygen with a flow rate of 4-40 L/min." Thus, we again determine that the claimed gas source embraces the hospital room oxygen supply described in Lathi. The appellant simply has not demonstrated that the functional limitation relating to the flow rate would have rendered the claimed gas source structurally different from that described in Lathi. *Schreiber*, 128 F.3d at 1477, 44 USPQ2d at 1432; *Casey*, 370 F.2d at 580, 152 USPQ at 238.

Thus, we determine that the preponderance of evidence weighs most heavily in favor of obviousness of the subject matter of claims 1, 2, 6, 8, 11 through 15, 20, 23 and 28 within the meaning of Section 103(a). Accordingly, we affirm the examiner's decision rejecting claims 1, 2, 6, 8, 11 through 15, 20, 23 and 28 under Section 103.

REJECTION BASED ON LETHI AND BOWDEN

As evidence of obviousness of the subject matter defined by claims 3 and 16 under 35 U.S.C. § 103, the examiner relies on the combined disclosures of Lethi and Bowden. See the Answer, page 8. The disclosure of Lethi is discussed above. As acknowledged by the examiner (Answer, page 8), Lethi does not disclose that its nasal catheter has "a plurality of markings indicating a series of common lengths..." as required by claim 3 on appeal.

To remedy this deficiency, the examiner relies on the disclosure of Bowden. See the Answer, page 8. The examiner finds (*Id.*) that Bowden teaches "a plurality of markings [on a catheter for supplying air/oxygen to a patient] for a variety of positions for different sized patients or children and for determining proper insertion [of the catheter]." See also Bowden, column 4, lines 42-45. The appellant does not dispute this finding. See the Brief, pages 10-11.

Given the above teachings, we concur with the examiner that one of ordinary skill in the art would have been led to provide a plurality of marking to the nasal catheter of the type described in Lethi, motivated by a reasonable expectation of effectively adjusting the length of the nasal catheter inserted to a patient using the markings. This is especially true in this case since it was known at the time of the invention the importance of the location of the nasal catheter and the adjustment of the length of the nasal catheter based on, *inter alia*, the size of a patient. See Lethi, column 1, lines 13-20 and the specification, page 4.

The appellant appears to argue that the plurality of markings taught in Bowden are not used for cutting a nasal catheter and that Lethi's nasal catheter is not appropriate for cutting. See the Brief, page 10. This argument is not well taken.

In the first place, we find this argument to be irrelevant inasmuch as it is not based on limitations appearing in claim 3 on appeal. *See In re Self*, 671 F.2d 1344, 1348, 213 USPQ 1, 5 (CCPA 1982) ("Many of appellant's arguments fail from the outset because, as

the solicitor has pointed out, they are not based on limitations appearing in the claims."). The cutting limitation argued by the appellant is not recited in claim 3.

In the second place, we find this argument to be unpersuasive since the references need not be combined for the reasons contemplated by the appellant. *In re Beattie*, 974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992)("As long as some motivation or suggestion to combine reference is provided by the prior art taken as a whole, the law does not require that the references be combined for the reasons contemplated by the inventor."). Although the prior art references do not suggest employing markings for the cutting purpose proposed by the appellant, they provide ample suggestion or motivation to employ a plurality of markings on the nasal catheter of the type described in Lethi as indicated *supra*.

Thus, based on the totality of record, including due consideration of the appellant's arguments, we determine that the preponderance of evidence weighs most heavily in favor of obviousness of the subject matter of claims 3 and 16 within the meaning of Section 103(a). Accordingly, we affirm the examiner's decision rejecting claims 3 and 16 under Section 103(a).

REJECTION BASED ON LETHI AND BRAIN

As evidence of obviousness of the subject matter defined by claims 4 and 17 under Section 103(a), the examiner relies on the combined disclosures of Lethi and Brain. See the Answer, page 9. The disclosure of Lethi is discussed above. As acknowledged by the

examiner (Answer, page 9), Lethi does not teach that its nasal catheter further comprises a radio-opaque strip.

To remedy this deficiency, the examiner relies on the disclosure of Brain. See the Answer, page 9. The examiner finds (*Id.*) that Brain teaches " the use of a radio-opaque strip [in a catheter (tube)] to allow easy identification of the location of a[n] [air/oxygen] tube [inserted in a patient]." See also Brain, column 6, lines 1-8. The appellant does not dispute this finding. See the Brief, page 11.

Given the above teachings, we concur with the examiner that one of ordinary skill in the art would have been led to provide such radio-opaque strip in the nasal catheter of the type described in Lethi, motivated by a reasonable expectation of improving the placement of the nasal catheter. As acknowledged by the appellant (specification, page 4), it is well known to one of ordinary skill in the art the importance of placing the nasal catheter in an appropriate location, which would not cause serious complications to patients. See also Lethi, column 1, lines 17-20.

Thus, notwithstanding the appellant's arguments to the contrary, we determine that the preponderance of evidence weighs most heavily in favor of obviousness of the subject matter of claims 4 and 17 within the meaning of Section 103(a). Accordingly, we affirm the examiner's decision rejecting claims 4 and 17 under Section 103(a).

REJECTION BASED ON LETHI AND SPOFFORD

As evidence of obviousness of the subject matter defined by claims 7 and 19 under Section 103(a), the examiner relies on the combined disclosures of Lethi and Spofford. See the Answer page 9. The disclosure of Lethi is discussed above. As acknowledged by the examiner (Answer, page 9-10), Lethi does not mention that its nasal catheter has a hydrophilic coating.

To remedy this deficiency, the examiner relies on the disclosure of Spofford. See the Answer, page 9. The examiner finds (*Id.*) that Spofford teaches that a hydrophilic coating in a catheter limits adhesion and subsequent build-up of mucous-type materials which could restrict the flow of oxygen through the catether. See also Spofford, column 4, lines 15-22. The appellant does not dispute this finding. See the Brief, pages 11-12. Moreover, the appellant acknowledges at page 4 of the specification that it was well known at the time of the invention that "mucus would tend to obstruct the [nasal] catheter."

Given the above teachings, we concur with the examiner that one of ordinary skill in the art would have been led to employ the hydrophilic coating described in Spofford in the nasal catheter of the type described in Lethi, motivated by a reasonable expectation of preventing or minimizing the formation of mucus in the nasal catheter.

Thus, notwithstanding the appellant's arguments to the contrary, we determine that the preponderance of evidence weighs most heavily in favor of obviousness of the subject

matter of claims 7 and 19 within the meaning of Section 103(a). Accordingly, we affirm the examiner's decision rejecting claims 7 and 19 under Section 103(a).

REJECTION BASED ON LETHI AND DANIELL

As evidence of obviousness of the subject matter defined by claims 9, 10, 21, 22, 26 and 27 under Section 103(a), the examiner relies on the combined disclosures of Lethi and Daniell. See the Answer page 10. The disclosure of Lethi is discussed above. As acknowledged by the examiner (Answer, page 10), Lethi does not teach "a humidifier controlling the humidity of the gas delivered through the nasal catheter."

To remedy this deficiency, the examiner relies on the disclosure of Daniell. See the Answer, page 10. The examiner finds (Answer, page 10) and the appellant does not dispute (Brief, page 12) that Daniell teaches "a humidifier for humidifying the gases delivered to the patient in order to prevent dehydration of the airways and nasal passages of the patient." Specifically, we note that Daniell states (column 2, lines 4-10):

> in order to orally deliver gases to a patient, it is very important that the gases are sufficiently humidified at all times. If not, parts of the mouth can dry out within very short times...causing discomfort. In other parts of the mouth salivary glands ...[can be] over stimulated causing excess saliva, swallowing difficulties and further discomfort.

Given the above teachings, we concur with the examiner that one of ordinary skill in the art would have been led to employ a humidifier to control the humidity of the gas delivered through the nasal catheter of the type described in Lethi, motivated by a reasonable expectation of avoiding various discomforts associated with "dehydration of

the airways and nasal passages of the patient" and "overstimulating the mouth salivary glands..." Indeed, the appellant does not challenge the examiner's determination that "it would have been obvious to one of ordinary skill in the art to modify Lethi's device to include a humidifier for humidifying the gases delivered to the patient..." Compare the Answer, page 10, with the Brief, page 12. Thus, we affirm the examiner's decision rejecting claims 9, 10, 21, 22, 26 and 27 under Section 103(a).

REMAND

We note that the appellant acknowledges that "advancing a catheter through a patient's nostril until the distal tip of the catheter is visible through the patient's mouth below the patient's uvula" as required by claim 25 is known to one of ordinary skill in the art. See the specification, pages 3-4. Thus, we remand this application to the examiner to determine whether the combined teachings of Daniell, Lethi and the appellant's admittedly known art affect the patentability of the subject matter recited in claim 25.

CONCLUSION

In view of the reasons set forth in the Answer and above, we affirm the examiner's decision rejecting the claims on appeal under Section 103(a) and remand the application to the examiner to determine the patentability of claim 25 as indicated *supra*.

In addition to affirming the examiner's rejection of one or more claims, this decision contains a remand. 37 CFR § 41.50(e) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004)) provides that

> [w]henever a decision of the Board includes a remand, that decision shall not be considered final for judicial review. When appropriate, upon conclusion of proceedings on remand before the examiner, the Board may enter an order otherwise making its decision final for judicial review.

Regarding any affirmed rejection, 37 CFR § 41.52(a)(1) provides "[a]ppellant may file a single request for rehearing within two months from the date of the original decision of the Board."

The effective date of the affirmance is deferred until conclusion of the proceedings before the examiner unless, as a mere incident to the limited proceedings, the affirmed rejection is overcome. If the proceedings before the examiner do not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejections, including any timely request for rehearing thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED/REMANDED

BRADLEY R. GARRIS
Administrative Patent Judge)
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) BOARD OF PATENT
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